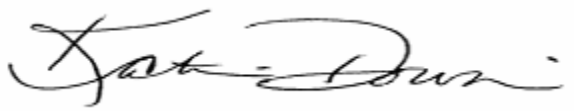
ANALYTICAL REPORT

Job Number: 580-5815-1

Job Description: Haughten Rd Orchard

For:
Washington State Dept of Ecology
15 W Yakima Ave
Suite 200
Yakima, WA 98902

Attention: Brian Deeken



Katie Downie
Project Manager II
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05/16/2007

Project Manager: Katie Downie

STL Seattle is a part of Severn Trent Laboratories, Inc.

Job Narrative
580-J5815-1

I. Receipt

One jar for sample "Storage" was received broken. The samples was fully contained within the ziploc bag, and there was sufficient sample to run the requested tests.

The samples were received past the 14 day extraction hold time for the requested tests, and the results have been flagged "H".

All other samples were received in good condition within temperature requirements.

II. GC/MS Semi VOA

Method 8141A:

Surrogate recovery for sample 580-5815-2 was outside control limits. This sample shows evidence of matrix interference; therefore, re-extraction and/or re-analysis was not performed.

Matrix spikes could not be recovered due to sample matrix interferences which required sample dilution. The associated laboratory control standard (LCS) met acceptance criteria.

Method 8151A:

Surrogate recovery for sample 580-5815-2 and the associated MSD analysis were outside control limits. This sample shows evidence of matrix interference; therefore, re-extraction and/or re-analysis was not performed.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch _18415____ were outside control limits, due to high levels of nontarget analytes. The associated laboratory control standard (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

III. GC Semi VOA

Method 8081A:

Due to the high concentration of target analytes, the matrix spike / matrix spike duplicate (MS/MSD) for batch 18425 could not be evaluated. The associated laboratory control standard (LCS) met acceptance criteria.

Method NWTPH-Dx:

#2 Diesel was detected in the MB at a level above the method detection limit and but below the reporting limit. No action was taken as the associated samples were diluted 1:20 and 1:50 rendering minimal hit in MB negligable.

Surrogate recovery for samples 580-5815-1 and 580-5815-2 were outside control limits. These samples show evidence of matrix interference; therefore, re-extraction and/or re-analysis were not performed.

No other analytical or quality issues were noted.

IV. General Chemistry

No analytical or quality issues were noted.

V. Organic Prep

No analytical or quality issues were noted.

METHOD SUMMARY

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Organophosphorous Compounds by GC-MS	STL SEA	SW846 8141A	
Ultrasonic Extraction	STL SEA		SW846 3550B
Chlorinated Herbicides by GC-MS	STL SEA	SW846 8151A	
Chlorinated Herbicides by GC - Solids Prep	STL SEA		SW846 8151A
Organochlorine Pesticides by Gas Chromatography	STL SEA	SW846 8081A	
Ultrasonic Extraction (Low Level)	STL SEA		SW846 3550B
Semi-Volatile Petroleum Products by NWTPH-Dx	STL SEA	NWTPH NWTPH-Dx	
Ultrasonic Extraction	STL SEA		SW846 3550B
Percent Moisture	STL SEA	EPA PercentMoisture	

LAB REFERENCES:

STL SEA = STL Seattle

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

EPA - US Environmental Protection Agency

SAMPLE SUMMARY

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-5815-1	Tank	Solid	04/16/2007 1418	05/07/2007 1015
580-5815-2	Storage	Solid	04/16/2007 1427	05/07/2007 1015

Client: Washington State Dept of Ecology | Job Number: 580-5815-1

Client Sample ID: **Storage**

Lab Sample ID: 580-5815-2 | Date Sampled: 04/16/2007 1427
Client Matrix: Solid | % Moisture: 8.4 | Date Received: 05/07/2007 1015

8141A Organophosphorous Compounds by GC-MS

Method: 8141A | Analysis Batch: 580-18521 | Instrument ID: SEA008
Preparation: 3550B | Prep Batch: 580-18413 | Lab File ID: L23043DD.D
Dilution: 500 | Initial Weight/Volume: 15.3930 g
Date Analyzed: 05/09/2007 1447 | Final Weight/Volume: 10 mL
Date Prepared: 05/08/2007 0835 | Injection Volume:

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dichlorvos		ND	H	18000	53000
Mevinphos		ND	H	3700	18000
Ethoprop		ND	H	5100	18000
Naled		ND	H	12000	37000
Sulfotepp		ND	H	4300	18000
Monochrotophos		ND	H	12000	37000
Phorate		ND	H	5900	18000
Dimethoate		ND	H	7700	23000
Demeton-O + Demeton-S		ND	H	2400	18000
Diazinon		ND	H	5300	18000
Disulfoton		ND	H	5100	18000
Parathion methyl		ND	H	7200	22000
Ronnel		ND	H	2900	18000
Chlorpyrifos		790000	H	12000	37000
Malathion		ND	H	4000	18000
Fenthion		ND	H	4500	18000
Parathion		ND	H	4500	18000
Trichloronate		ND	H	5300	18000
Tetrachlorvinphos (Z-isomer)		ND	H	9000	27000
Merphos		ND	H	5100	18000
Tokuthion		ND	H	4000	18000
Fensulfothion		ND	H	14000	43000
Bolstar		ND	H	3700	18000
EPN		ND	H	9000	27000
Azinphos-methyl		ND	H	6900	21000
Coumaphos		ND	H	4000	18000

Surrogate	%Rec		Acceptance Limits
Tributyl phosphate	0	X	38 - 129
Triphenylphosphate	0	X	45 - 125

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Client Sample ID: Storage

Lab Sample ID: 580-5815-2 Date Sampled: 04/16/2007 1427
Client Matrix: Solid % Moisture: 8.4 Date Received: 05/07/2007 1015

8151A Chlorinated Herbicides by GC-MS

Method: 8151A Analysis Batch: 580-18469 Instrument ID: SEA008
Preparation: 8151A Prep Batch: 580-18415 Lab File ID: L23049.D
Dilution: 1.0 Initial Weight/Volume: 15.9194 g
Date Analyzed: 05/08/2007 2034 Final Weight/Volume: 10 mL
Date Prepared: 05/08/2007 0841 Injection Volume:

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dalapon		ND	H	4.7	17
4-Nitrophenol		ND	H	1.2	6.8
Dicamba		ND	H	0.94	6.8
MCPP		ND	H	1.0	6.8
MCPA		ND	H	0.88	6.8
Dichlorprop		ND	H	1.5	6.8
2,4-D		ND	H	0.80	6.8
Pentachlorophenol		ND	H	1.9	6.8
Silvex (2,4,5-TP)		ND	H	2.1	6.8
2,4,5-T		ND	H	0.57	6.8
Dinoseb		ND	H	2.3	17
2,4-DB		ND	H	1.6	6.8

Surrogate	%Rec		Acceptance Limits
2,4-Dichlorophenylacetic acid	132	X	51 - 129

Client: Washington State Dept of Ecology | Job Number: 580-5815-1

Client Sample ID: **Storage**

Lab Sample ID: 580-5815-2 | Date Sampled: 04/16/2007 1427
Client Matrix: Solid | % Moisture: 8.4 | Date Received: 05/07/2007 1015

8081A Organochlorine Pesticides by Gas Chromatography

Method: 8081A | Analysis Batch: 580-18625 | Instrument ID: SEA035
Preparation: 3550B | Prep Batch: 580-18425 | Lab File ID: ECD25378.D
Dilution: 500 | Initial Weight/Volume: 10.3077 g
Date Analyzed: 05/14/2007 1338 | Final Weight/Volume: 10 mL
Date Prepared: 05/08/2007 1036 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aldrin		ND	H	57	530
alpha-BHC		ND	H	58	530
beta-BHC		95	J H	69	530
delta-BHC		ND	H	64	530
gamma-BHC (Lindane)		ND	H	62	530
4,4'-DDD		ND	H	140	1100
4,4'-DDE		ND	H	120	1100
4,4'-DDT		ND	H	140	1100
Dieldrin		220	J H	120	1100
Endosulfan I		50000	H	63	530
Endosulfan II		26000	H	140	1100
Endosulfan sulfate		250	J H	180	1100
Endrin		ND	H	220	1100
Endrin aldehyde		ND	H	130	1100
Heptachlor		ND	H	71	530
Heptachlor epoxide		ND	H	67	530
Methoxychlor		1100	J H	710	5300
Endrin ketone		ND	H	130	1100
Toxaphene		ND	H	5300	53000
alpha-Chlordane		ND	H	64	530
gamma-Chlordane		ND	H	64	530

Surrogate	%Rec		Acceptance Limits
Tetrachloro-m-xylene	125	X D	49 - 123
DCB Decachlorobiphenyl	0	X D	40 - 158

Client: Washington State Dept of Ecology | Job Number: 580-5815-1

Client Sample ID: **Tank**

Lab Sample ID:	580-5815-1			Date Sampled:	04/16/2007 1418
Client Matrix:	Solid	% Moisture:	7.1	Date Received:	05/07/2007 1015

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method:	NWTPH-Dx	Analysis Batch: 580-18558		Instrument ID:	SEA013
Preparation:	3550B	Prep Batch: 580-18471		Lab File ID:	FA29362.D
Dilution:	1.0			Initial Weight/Volume:	10.1838 g
Date Analyzed:	05/10/2007 1841			Final Weight/Volume:	10 mL
Date Prepared:	05/09/2007 1211			Injection Volume:	
				Column ID:	PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Motor Oil (>C24-C36)		1000	H	6.3	53

Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	X	50 - 150

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Client Sample ID: **Tank**

Lab Sample ID: 580-5815-1
Client Matrix: Solid % Moisture: 7.1
Date Sampled: 04/16/2007 1418
Date Received: 05/07/2007 1015

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3550B
Dilution: 20
Date Analyzed: 05/11/2007 1324
Date Prepared: 05/09/2007 1211
Analysis Batch: 580-18558
Prep Batch: 580-18471
Instrument ID: SEA013
Lab File ID: FA29378.D
Initial Weight/Volume: 10.1838 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
#2 Diesel (C10-C24)		40000	H B	130	530

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Client Sample ID: **Storage**

Lab Sample ID: 580-5815-2 Date Sampled: 04/16/2007 1427
Client Matrix: Solid % Moisture: 8.4 Date Received: 05/07/2007 1015

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx
Preparation: 3550B
Dilution: 1.0
Date Analyzed: 05/10/2007 1902
Date Prepared: 05/09/2007 1211
Analysis Batch: 580-18558
Prep Batch: 580-18471
Instrument ID: SEA013
Lab File ID: FA29363.D
Initial Weight/Volume: 10.4456 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	X	50 - 150

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Client Sample ID: **Storage**

Lab Sample ID: 580-5815-2 Date Sampled: 04/16/2007 1427
Client Matrix: Solid % Moisture: 8.4 Date Received: 05/07/2007 1015

NWTPH-Dx Semi-Volatile Petroleum Products by NWTPH-Dx

Method: NWTPH-Dx Analysis Batch: 580-18558 Instrument ID: SEA013
Preparation: 3550B Prep Batch: 580-18471 Lab File ID: FA29379.D
Dilution: 50 Initial Weight/Volume: 10.4456 g
Date Analyzed: 05/11/2007 1349 Final Weight/Volume: 10 mL
Date Prepared: 05/09/2007 1211 Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Motor Oil (>C24-C36)		79000	H	310	2600
#2 Diesel (C10-C24)		24000	H B	310	1300

General Chemistry

Client Sample ID: Tank

Lab Sample ID: 580-5815-1 Date Sampled: 04/16/2007 1418
Client Matrix: Solid Date Received: 05/07/2007 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	93		%	0.10	0.10	1.0	PercentMoisture
Anly Batch: 580-18556	Date Analyzed	05/11/2007 1425					

Client Sample ID: Storage

Lab Sample ID: 580-5815-2 Date Sampled: 04/16/2007 1427
Client Matrix: Solid Date Received: 05/07/2007 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Solids	92		%	0.10	0.10	1.0	PercentMoisture
Anly Batch: 580-18392	Date Analyzed	05/07/2007 0903					

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Method Blank - Batch: 580-18413

Method: 8141A
Preparation: 3550B

Lab Sample ID: MB 580-18413/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/08/2007 1304
Date Prepared: 05/08/2007 0835

Analysis Batch: 580-18521
Prep Batch: 580-18413
Units: ug/Kg

Instrument ID: SEA008
Lab File ID: L23037.D
Initial Weight/Volume: 15 g
Final Weight/Volume: 10 mL
Injection Volume:

Analyte	Result	Qual	MDL	RL
Dichlorvos	ND		34	100
Mevinphos	ND		7.0	33
Ethoprop	ND		9.5	33
Naled	ND		24	71
Sulfotepp	ND		8.0	33
Monochrotophos	ND		23	69
Phorate	ND		11	33
Dimethoate	ND		15	44
Demeton-O + Demeton-S	ND		4.5	33
Diazinon	ND		10	33
Disulfoton	ND		9.5	33
Parathion methyl	ND		14	41
Ronnel	ND		5.5	33
Chlorpyrifos	ND		23	69
Malathion	ND		7.5	33
Fenthion	ND		8.5	33
Parathion	ND		8.5	33
Trichloronate	ND		10	33
Tetrachlorvinphos (Z-isomer)	ND		17	51
Merphos	ND		9.5	33
Tokuthion	ND		7.5	33
Fensulfothion	ND		27	80
Bolstar	ND		7.0	33
EPN	ND		17	51
Azinphos-methyl	ND		13	39
Coumaphos	ND		7.5	33

Surrogate	% Rec	Acceptance Limits
Tributyl phosphate	80	38 - 129
Triphenylphosphate	97	45 - 125

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 580-18413

Method: 8141A
Preparation: 3550B

LCS Lab Sample ID:	LCS 580-18413/2-AA	Analysis Batch: 580-18521	Instrument ID: SEA008
Client Matrix:	Solid	Prep Batch: 580-18413	Lab File ID: L23038.D
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 15 g
Date Analyzed:	05/08/2007 1326		Final Weight/Volume: 10 mL
Date Prepared:	05/08/2007 0835		Injection Volume:

LCSD Lab Sample ID:	LCSD 580-18413/3-AA	Analysis Batch: 580-18521	Instrument ID: SEA008
Client Matrix:	Solid	Prep Batch: 580-18413	Lab File ID: L23039.D
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 15 g
Date Analyzed:	05/08/2007 1348		Final Weight/Volume: 10 mL
Date Prepared:	05/08/2007 0835		Injection Volume:

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Dichlorvos	115	117	50 - 150	1	50		
Mevinphos	117	116	50 - 150	1	50		
Ethoprop	91	103	50 - 150	12	50		
Phorate	102	102	50 - 150	0	50		
Diazinon	102	106	58 - 113	4	28		
Disulfoton	98	108	50 - 150	9	50		
Parathion methyl	101	101	50 - 150	0	50		
Ronnel	88	94	50 - 150	7	50		
Chlorpyrifos	100	111	55 - 115	10	19		
Fenthion	87	86	50 - 150	2	50		
Trichloronate	94	103	50 - 150	9	50		
Tetrachlorvinphos (Z-isomer)	96	100	50 - 150	4	50		
Tokuthion	98	108	50 - 150	10	50		
Bolstar	99	101	50 - 150	2	50		
Azinphos-methyl	110	118	38 - 133	6	31		
Coumaphos	109	108	50 - 150	0	50		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tributyl phosphate	89	93	38 - 129
Triphenylphosphate	89	86	45 - 125

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-18413

Method: 8141A
Preparation: 3550B

MS Lab Sample ID:	580-5815-2	Analysis Batch:	580-18521	Instrument ID:	SEA008
Client Matrix:	Solid	Prep Batch:	580-18413	Lab File ID:	L23040.D
Dilution:	1.0			Initial Weight/Volume:	15.9768 g
Date Analyzed:	05/08/2007 1626			Final Weight/Volume:	10 mL
Date Prepared:	05/08/2007 0835			Injection Volume:	

MSD Lab Sample ID:	580-5815-2	Analysis Batch:	580-18521	Instrument ID:	SEA008
Client Matrix:	Solid	Prep Batch:	580-18413	Lab File ID:	L23041.D
Dilution:	1.0			Initial Weight/Volume:	15.2164 g
Date Analyzed:	05/08/2007 1649			Final Weight/Volume:	10 mL
Date Prepared:	05/08/2007 0835			Injection Volume:	

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Dichlorvos	0	237	50 - 150	NC	50	F	F
Mevinphos	0	257	50 - 150	NC	50	F	F
Ethoprop	0	62	50 - 150	NC	50	F	
Phorate	0	0	50 - 150	NC	50	F	F
Diazinon	0	0	58 - 113	NC	28	F	F
Disulfoton	0	0	50 - 150	NC	50	F	F
Parathion methyl	0	0	50 - 150	NC	50	F	F
Ronnel	0	0	50 - 150	NC	50	F	F
Chlorpyrifos	-33100	-31500	55 - 115	NC	19	4	4
Fenthion	0	0	50 - 150	NC	50	F	F
Trichloronate	0	0	50 - 150	NC	50	F	F
Tetrachlorvinphos (Z-isomer)	0	0	50 - 150	NC	50	F	F
Tokuthion	0	0	50 - 150	NC	50	F	F
Bolstar	0	0	50 - 150	NC	50	F	F
Azinphos-methyl	0	0	38 - 133	NC	31	F	F
Coumaphos	0	0	50 - 150	NC	50	F	F

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Tributyl phosphate	0	X	0	X	38 - 129
Triphenylphosphate	0	X	0	X	45 - 125

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Method Blank - Batch: 580-18415

Method: 8151A
Preparation: 8151A

Lab Sample ID: MB 580-18415/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/08/2007 1841
Date Prepared: 05/08/2007 0841

Analysis Batch: 580-18469
Prep Batch: 580-18415
Units: ug/Kg

Instrument ID: SEA008
Lab File ID: L23044.D
Initial Weight/Volume: 15 g
Final Weight/Volume: 10 mL
Injection Volume:

Analyte	Result	Qual	MDL	RL
Dalapon	ND		4.6	17
4-Nitrophenol	ND		1.1	6.7
Dicamba	ND		0.91	6.7
MCPP	ND		1.0	6.7
MCPA	ND		0.86	6.7
Dichlorprop	ND		1.4	6.7
2,4-D	ND		0.78	6.7
Pentachlorophenol	ND		1.8	6.7
Silvex (2,4,5-TP)	ND		2.0	6.7
2,4,5-T	ND		0.56	6.7
Dinoseb	ND		2.3	17
2,4-DB	ND		1.6	6.7

Surrogate	% Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	117	51 - 129

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 580-18415

Method: 8151A
Preparation: 8151A

LCS Lab Sample ID: LCS 580-18415/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/08/2007 1904
Date Prepared: 05/08/2007 0841

Analysis Batch: 580-18469
Prep Batch: 580-18415
Units: ug/Kg

Instrument ID: SEA008
Lab File ID: L23045.D
Initial Weight/Volume: 15 g
Final Weight/Volume: 10 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 580-18415/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/08/2007 1926
Date Prepared: 05/08/2007 0841

Analysis Batch: 580-18469
Prep Batch: 580-18415
Units: ug/Kg

Instrument ID: SEA008
Lab File ID: L23046.D
Initial Weight/Volume: 15 g
Final Weight/Volume: 10 mL
Injection Volume:

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Dalapon	58	57	16 - 74	2	30		
4-Nitrophenol	73	71	50 - 150	3	30		
Dicamba	93	96	48 - 123	3	30		
MCPP	76	90	53 - 154	17	30		
MCPA	113	109	50 - 150	3	30		
Dichlorprop	123	118	75 - 140	4	30		
2,4-D	116	112	46 - 136	3	30		
Pentachlorophenol	112	106	50 - 150	5	30		
Silvex (2,4,5-TP)	116	109	52 - 137	6	30		
2,4,5-T	104	99	45 - 135	4	30		
Dinoseb	91	82	18 - 157	10	30		
2,4-DB	87	84	50 - 155	3	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	88	85	51 - 129

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology

Job Number: 580-5815-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-18415

Method: 8151A
Preparation: 8151A

MS Lab Sample ID:	580-5815-2	Analysis Batch: 580-18469	Instrument ID: SEA008
Client Matrix:	Solid	Prep Batch: 580-18415	Lab File ID: L23047.D
Dilution:	1.0		Initial Weight/Volume: 15.4587 g
Date Analyzed:	05/08/2007 1949		Final Weight/Volume: 10 mL
Date Prepared:	05/08/2007 0841		Injection Volume:

MSD Lab Sample ID:	580-5815-2	Analysis Batch: 580-18469	Instrument ID: SEA008
Client Matrix:	Solid	Prep Batch: 580-18415	Lab File ID: L23048.D
Dilution:	1.0		Initial Weight/Volume: 15.8018 g
Date Analyzed:	05/08/2007 2011		Final Weight/Volume: 10 mL
Date Prepared:	05/08/2007 0841		Injection Volume:

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Dalapon	36	35	16 - 74	6	30		
4-Nitrophenol	136	129	50 - 150	8	30		
Dicamba	156	173	48 - 123	8	30	F	F
MCPP	91	110	53 - 154	16	30		
MCPA	104	120	50 - 150	11	30		
Dichlorprop	91	114	75 - 140	20	30		
2,4-D	69	126	46 - 136	57	30		F
Pentachlorophenol	106	145	50 - 150	29	30		
Silvex (2,4,5-TP)	92	151	52 - 137	47	30		F
2,4,5-T	107	182	45 - 135	50	30		F
Dinoseb	0	33	18 - 157	NC	30	F	
2,4-DB	272	324	50 - 155	15	30	F	F

Surrogate	MS % Rec	MSD % Rec		Acceptance Limits
2,4-Dichlorophenylacetic acid	129	166	X	51 - 129

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Method Blank - Batch: 580-18425

Method: 8081A
Preparation: 3550B

Lab Sample ID: MB 580-18425/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 2035
Date Prepared: 05/08/2007 1036

Analysis Batch: 580-18625
Prep Batch: 580-18425
Units: ug/Kg

Instrument ID: SEA035
Lab File ID: ECD25334.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aldrin	ND		0.11	1.0
alpha-BHC	ND		0.11	1.0
beta-BHC	ND		0.13	1.0
delta-BHC	ND		0.12	1.0
gamma-BHC (Lindane)	ND		0.12	1.0
4,4'-DDD	ND		0.27	2.0
4,4'-DDE	ND		0.23	2.0
4,4'-DDT	ND		0.27	2.0
Dieldrin	ND		0.22	2.0
Endosulfan I	ND		0.12	1.0
Endosulfan II	ND		0.27	2.0
Endosulfan sulfate	ND		0.34	2.0
Endrin	ND		0.42	2.0
Endrin aldehyde	ND		0.25	2.0
Heptachlor	ND		0.14	1.0
Heptachlor epoxide	ND		0.13	1.0
Methoxychlor	ND		1.3	10
Endrin ketone	ND		0.25	2.0
Toxaphene	ND		10	100
alpha-Chlordane	ND		0.12	1.0
gamma-Chlordane	ND		0.12	1.0

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	100	49 - 123
DCB Decachlorobiphenyl	84	40 - 158

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 580-18425

Method: 8081A
Preparation: 3550B

LCS Lab Sample ID: LCS 580-18425/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 2054
Date Prepared: 05/08/2007 1036

Analysis Batch: 580-18625
Prep Batch: 580-18425
Units: ug/Kg

Instrument ID: SEA035
Lab File ID: ECD25335.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 580-18425/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 2114
Date Prepared: 05/08/2007 1036

Analysis Batch: 580-18625
Prep Batch: 580-18425
Units: ug/Kg

Instrument ID: SEA035
Lab File ID: ECD25336.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aldrin	95	99	53 - 126	5	24		
alpha-BHC	97	100	41 - 128	6	28		
beta-BHC	94	96	48 - 121	8	32		
delta-BHC	51	50	22 - 153	9	36		
gamma-BHC (Lindane)	99	100	50 - 127	9	29		
4,4'-DDD	91	96	44 - 141	2	41		
4,4'-DDE	92	97	47 - 140	5	40		
4,4'-DDT	92	95	34 - 159	0	47		
Dieldrin	91	96	53 - 134	3	32		
Endosulfan I	93	94	52 - 122	6	31		
Endosulfan II	83	85	53 - 132	12	36		
Endosulfan sulfate	80	86	42 - 128	4	43		
Endrin	92	100	46 - 138	5	36		
Endrin aldehyde	85	89	12 - 179	5	47		
Heptachlor	100	100	50 - 130	3	31		
Heptachlor epoxide	91	96	49 - 123	3	31		
Methoxychlor	86	92	46 - 154	1	46		
Endrin ketone	85	90	45 - 127	5	45		
alpha-Chlordane	89	94	46 - 118	4	33		
gamma-Chlordane	92	97	49 - 122	5	32		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	98	101	49 - 123
DCB Decachlorobiphenyl	82	89	40 - 158

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-18425

Method: 8081A
Preparation: 3550B

MS Lab Sample ID:	580-5815-2	Analysis Batch:	580-18625	Instrument ID:	SEA035
Client Matrix:	Solid	Prep Batch:	580-18425	Lab File ID:	ECD25379.D
Dilution:	500			Initial Weight/Volume:	10.8723 g
Date Analyzed:	05/14/2007 1358			Final Weight/Volume:	10 mL
Date Prepared:	05/08/2007 1036			Injection Volume:	
				Column ID:	PRIMARY
MSD Lab Sample ID:	580-5815-2	Analysis Batch:	580-18625	Instrument ID:	SEA035
Client Matrix:	Solid	Prep Batch:	580-18425	Lab File ID:	ECD25380.D
Dilution:	500			Initial Weight/Volume:	10.1462 g
Date Analyzed:	05/14/2007 1417			Final Weight/Volume:	10 mL
Date Prepared:	05/08/2007 1036			Injection Volume:	
				Column ID:	PRIMARY

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aldrin	0	0	53 - 126	NC	24	F	F
alpha-BHC	142	122	41 - 128	NC	28	F	
beta-BHC	-85	-208	48 - 121	NC	32	J 4	4
delta-BHC	0	0	22 - 153	NC	36	F	F
gamma-BHC (Lindane)	0	126	50 - 127	NC	29	F	
4,4'-DDD	0	0	44 - 141	NC	41	F	F
4,4'-DDE	367	135	47 - 140	NC	40	F	
4,4'-DDT	555	310	34 - 159	NC	47	4	4
Dieldrin	-107	234	53 - 134	170	32	J 4	J 4
Endosulfan I	-19100	7460	52 - 122	2	31	4	4
Endosulfan II	-14900	-11700	53 - 132	6	36	4	4
Endosulfan sulfate	-174	-162	42 - 128	4	43	J 4	J 4
Endrin	324	747	46 - 138	NC	36	F	F
Endrin aldehyde	0	0	12 - 179	NC	47	F	F
Heptachlor	316	212	50 - 130	NC	31	F	F
Heptachlor epoxide	181	200	49 - 123	NC	31	F	F
Methoxychlor	-806	-608	46 - 154	14	46	J 4	J 4
Endrin ketone	204	211	45 - 127	NC	45	F	F
alpha-Chlordane	0	0	46 - 118	NC	33	F	F
gamma-Chlordane	241	247	49 - 122	NC	32	F	F

Surrogate	MS % Rec		MSD % Rec		Acceptance Limits
Tetrachloro-m-xylene	127	X D	130	X D	49 - 123
DCB Decachlorobiphenyl	0	X D	0	X D	40 - 158

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Method Blank - Batch: 580-18471

Method: NWTPH-Dx
Preparation: 3550B

Lab Sample ID: MB 580-18471/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 1730
Date Prepared: 05/09/2007 1211

Analysis Batch: 580-18558
Prep Batch: 580-18471
Units: mg/Kg

Instrument ID: SEA013
Lab File ID: FA29359.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:

Analyte	Result	Qual	MDL	RL
Motor Oil (>C24-C36)	ND		6.0	50
#2 Diesel (C10-C24)	13	J	6.0	25

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	68	50 - 150

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 580-18471

Method: NWTPH-Dx
Preparation: 3550B

LCS Lab Sample ID: LCS 580-18471/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 1750
Date Prepared: 05/09/2007 1211

Analysis Batch: 580-18558
Prep Batch: 580-18471
Units: mg/Kg

Instrument ID: SEA013
Lab File ID: FA29360.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 580-18471/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/10/2007 1816
Date Prepared: 05/09/2007 1211

Analysis Batch: 580-18558
Prep Batch: 580-18471
Units: mg/Kg

Instrument ID: SEA013
Lab File ID: FA29361.D
Initial Weight/Volume: 10 g
Final Weight/Volume: 10 mL
Injection Volume:

Analyte	% Rec. LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Motor Oil (>C24-C36)	89	95	64 - 127	7	17		
#2 Diesel (C10-C24)	99	101	70 - 125	2	16		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	92	99	50 - 150

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Lab Section	Qualifier	Description
GC/MS Semi VOA		
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	RPD of the MS and MSD exceeds the control limits
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate exceeds the control limits
GC Semi VOA		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time
	X	Surrogate exceeds the control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Laboratory Analyses Required

Project Name: Haughton Rd Orchard
SIC: ______ **Program:** TCP
Send Results to: Brian Deeken **Mail Stop:** ______

☒ Preliminary Investigation ☐ For HW Designation **Date Results needed by:** 5/11/07
☐ Monitoring ☐ For NPDES ☐ There is a QAPP for this project

Sampling Date (Year: 2007) Mo	Da	Time Hr	Mn	Field Station Identification	Lab Sample Number	Matrix Code	Source Code	No. of Containers
04	16	14	18	Tank		40	83	1
04	16	14	27	Storage		40	83	2

General Chemistry

Field Station Identification	Alkalinity	Conductivity	pH	Turbidity	☐ Chloride ☐ Sulfate	☐ Fluoride	Cyanide ☐ Total ☐ Weak	Total Solids	Total Nonvolatile Solids	Total Suspended Solids	Total Nonvol Suspend	Total Dissolved Solids	☐ % Solids ☐ % Vol Solids	TOC	DOC	BOD (5 day)	BOD, Ultimate	Oil & Grease	Ammonia	Nitrate-Nitrite	Total Phos. ☐ low level	Orthophos.	Nitrate	Nitrite	☐ TPN ☐ TKN	Chlorophyll ☐ filters
Tank																										
Storage																										

Micro and **Metals**

Field Station Identification	Fecal Coliforms ☐ MF ☐ MPN	Total Coliforms ☐ MF ☐ MPN	E-Coli ☐ MF ☐ MPN	%Klebsiella	Enterococcus	Metals Scan ☐ low level	TCLP Metals	Mercury (Hg) ☐ low level	Hardness	PP Mets (☐Total ☐Total Rec. ☐Dissolved)
Tank										
Storage										

Organic Chemistry

Field Station Identification	BNA ☐ w/extensive TIC's	PAH's	VOA ☐ w/extensive TIC's	BTEX	Pests/~~PCB's~~	PCB's only	OP - Pests	N-Pest	Herbicides	NWTPH-HCID	NWTPH-G	NWTPH-D	HCID Only (Hydrocarbon ID)
Tank												X	
Storage					X		X	X	X			X	

Project Officer: Brian Deeken
Phone number: (509) 454-7290
Samplers: Brian Deeken

Recorder: Brian Deeken Brian T Deeken
Date: 16 APR 07

Chain of Custody Record

Relinquished By:	Received By:	Yr	Mo	Da	Hr	Mn	Seal I.D.	Condition of Seals	Comments
Brian Deeken	Khooley	07	05	07	10	15		Good	18.9 c 1 Jar Storage "PCB Ben"

Comments: Samples sent via Fed EX

ECY 040-115 (Rev. 01/01)

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Washington State Dept of Ecology Job Number: 580-5815-1

Login Number: 5815

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Fed Ex delay..Client notified
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	1-Storage jar rcvd broken
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	